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VII. On some proposed transfers of names of genera. By DAVID SHARP, M.B., F.Z.S.

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ALTHOUGH much difficulty about generic names has always been experienced by zoologists, and much temporary confusion as to the application of particular names has existed, yet the difficulties have not proved hitherto intolerable. It is true that a name has frequently been proposed, accompanied by very little scientific or systematic definition, and perhaps, as is natural in such a case, has been used by a subsequent writer with a different application ; yet in the course of time it has been found that sufficient general assent has been given to some one application of the name; and that this has thus become extremely useful for purposes of reference and for preserving the continuity of systematic zoology during a number of generations. It may be admitted that the treatment of generic names has been unsystematic and loose, even, as some would say, unjust; but it is equally true that consciously or unconsciously a process of natural selection has been at work, and that certain generic names have come to be generally adopted so as to be undoubtedly an aid to reference and an assistance in making ourselves mutually comprehensible.

This practical settlement is not, however, accepted by a few nomenclatorial specialists; and some of those who have drawn up systematic catalogues have ignored the general opinion, and endeavoured to alter the application of some of the commonest names. By their desire to make their catalogue on some exact principle, their insight has been obscured to such an extent as to render them blind to the inconvenience caused to the rest of the world by the inevitable confusion thus introduced. So that they have not only made changes, but have frequently made them in a manner calculated to create

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the greatest possible confusion. I may describe it by the following analogy: the names of the letters or signs A, B, C are as well known to us as the letters themselves, but these specialists propose to eliminate the name A altogether, to call the letter A, B, and to provide a new name for B; it would not, I think, be easy to devise a system that should render confusion more complete. The name *Procrustes* is to cease to exist, and to be replaced by *Carabus*, while *Carabus* is to be called *Tachypus*, and our old friend *Tachypus* is to have a new name altogether.

It is evident that it would be much less inconvenient to have an entirely new system of names than to be compelled to rearrange, as fresh mental conceptions, these rudely dislocated associations. In the absence of any competitor the 3rd edition of the 'Catalogue of European Coleoptera, recently published at Berlin, must be considered a standard work, and in it certain of these objectionable transfers are unfortunately adopted. Emboldened by this success, M. des Gozis has just published a pamphlet, in which he proposes to carry the confusion of names to its completion. It is well written, and its author from many points of view must be congratulated : I would, indeed, advise every coleopterist to read it, and, having done so, I hope he will conclude to have nothing to do with the changes proposed in it. It is called 'Recherche de l'espèce typique de guelques anciens genres,' and, as it is not accessible to many, I will take the liberty of translating its Introduction as follows :---

"The primary necessity for the progress of a science is that its nomenclature shall be fixed. The necessary condition for a fixed nomenclature is that it shall rest on invariable principles, and nothing be left to the judgment of an individual. For this reason, and surrounded by a constantly increasing flood of synonyms, the most authoritative savants a few years since gave out the principle, now almost unanimously admitted, of Priority.

"The first consequence that one can notice from the application of this principle has been naturally a complete turning upside down ('un grand bouleversement'). It was foreseen. It was necessary that justice should be done, and that we should efface even to the last trace the iniquities accumulated by a century of arbitrary proceedings. This task is so long and rough that it is far from being yet finished, but it moves surely, if slowly, in France as well as in Germany, in spite of the antiquated protests of certain entomologists who are frightened by the momentary chaos into which we are plunging, and who do not see that we must undergo this in order to arrive at stability, that it is indeed the only means of reaching this, while, on the other hand, adherence to what they call *prescription* or *convention* leads to the consequence that everyone can do what he likes if he should happen to be supported by a school or scholars who will support him in his absurdities. This is what happened in the case of Fabricius, and it is the cause of all the present mischief.

"Let us, then, be reactionaries.* Away with convention : away with conventional applications of names turned aside from their primitive sense. And do not let us restrict ourselves to the revision of a few specific names: let us frankly take up the huge question of genera, which has been but little attempted hitherto. Reitter has carried it out happily and justly in the last fascicule of his 'Bestimmung's-Tabelle.' He has restored to the true Silphæ of Linnæus-Necrophorus of Fabricius -their name, and has returned also to the Silphæ of modern authors the name of Peltis that Geoffroy gave to them; and has also distributed in a proper manner the two names Liodcs and Anisotoma, which have been interchanged by all authors. This example encourages me to do that which I have long contemplated, and just as I had already recognised the necessity of the changes he has carried out; so I trust those which follow will be equally well received, since they are prompted by the same idea, and are executed by the same law.

"Moreover, though as I have just said, only a few years have elapsed since recognition of the law of Priority became general, it is none the less true (rendering to each the justice that is due to him) that, there have always been generous and upright spirits who have diligently proclaimed this primordial principle, and have demanded its practical application. They preached, it is true, in the wilderness, but remained true

^{* &}quot;Reagissons done." It would perhaps render his feeling more correctly to say, "Let us then continue to agitate."

to the standard of a cause now, thanks perhaps to their tenacity, victorious. I must specially mention Marsham; his preface to 'Entomologica Britannica' is but a lengthy plea for Linnæus against Fabricius, the arch-muddler, as he has been justly styled. And we also, the entomologists of 1886, partisans by conviction of the law of priority, we are going to restore, wherever we can, the ancient names, as commanded by reason and the laws of our science."

Our talented French contemporary, it must be admitted, expresses himself frankly and well. But if we examine the changes he introduces us to by these words we shall see at once that they are themselves a convention, based on an assumption and carried out by a fictitious artifice : the convention is "Priority"; the assumption is that priority can and should be applied to generic names, and the artifice is the treating a species artificially selected from a genus as if it were the genus itself.

This system of transfers is, in fact, suggested by theory, and, while the practical objections to the transfers are so evident that no attempt to disguise them is made even by des Gozis himself, who frankly tells us he is taking us into chaos, a very little consideration is sufficient to make it clear that the system is theoretically as unsound as it is admitted to be objectionable in practice.

It is based on "Priority." Granted that "Priority" is a good thing as regards trivial or specific names, it still remains to be shown that it is a good thing in the case of generic names. I have myself twelve or fifteen years ago argued strongly for "Priority" in trivial names, and pointed out that it is inapplicable in the case of generic names, because genera themselves are constantly fluctuating. The application of generic names changes naturally whenever a genus is altered or divided, and it is at that moment of transition that the new application of a name formerly applied to the whole should be decided. This is practically the course adopted by naturalists, and it is clearly the only reasonable one. In 'Nature' (vol. ix., p. 260), A. R. Wallace has laid down the following principles :-- "1. To adopt absolutely and without exception the principle of priority as regards specific or trivial names. 2. To adopt the same

principle for genera only so long as the generic character, or definition of the genus, remains unaltered; but whenever an original investigator defines a genus more completely than has been done before, he is to be left free to name it as he pleases. Every consideration of utility and common sense will, of course, lead him to retain a name already in use where the new genus does not materially differ from an older one; but of that he is alone the judge, and it should be absolutely forbidden to any third party to say that a name so given must be changed."

This is surely clear, definite, and diametrically opposed to M. des Gozis' assumptions. Indeed, so difficult is it to apply the theory of Priority to genera that it has only been found possible to do so by devising an artifice for the purpose. This consists in saying that the species considered as the type of the genus by its author shall always retain the original generic name; but, as the older writers on Entomology had not the remotest conception of such a thing as this typical species, it is necessary to invent a type for them. This has been done by another convention, viz., by saying that when an author does not mention a type for his genus, the first species he placed in the genus shall be taken as the type. I am not in the least arguing against the utility of these assumptions when properly wielded; they may be found extremely useful by any naturalist who wishes to guide his conduct in such a matter by some generally understood principle; but it is quite ridiculous to take for granted that they are beyond question, that they are free from "convention," and more especially to assume that the next generation will feel itself bound to accept them.

Here we have M. des Gozis refusing to accept the practical conclusions arrived at by past generations and consecrated by use in a century of literature, and yet at the same time taking it for granted that his suggestions and method are so certain to be adopted by a future generation that he invites us to plunge into chaos with only them to buoy us. Is it probable his belief in the harmony between his theory and future generations is well founded? Are the signs of the times such as to make us believe that the next generation will certainly accept a method artificially devised by one or two

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individuals of this generation? The answer must be a very doubtful one. It is at any rate clear that we may leave future generations to decide for *themselves*, and may at present do what is most convenient for the present generation. On the whole history teaches us that this is the sort of decision a future generation is most likely to respect, and that such a course taken by us is more likely to maintain unbroken the continuity between past and future—that is, to secure stability.

But M. des Gozis appeals to another sentiment, and to one that we must all respect-the sense of justice. This part of the question has been frequently discussed, and may therefore be quickly passed over. Let it be granted that had there been in use in the time of Fabricius a system for managing changes of generic names, some injustices would have been avoided; it is none the less true that no such system was in use, and that we cannot go back one hundred years to put it in operation. I respect greatly Mr. Marsham's feelings of indignation and his injured sense of justice, but those feelings have become "portions and parcels of the dreadful past," and cannot now be altered, do what we will. The common sense of mankind may be said to have decided that in no case can a law, even where intended to promote fair dealing between individuals, be made retrospective in its action. By no human means can the iniquities accumulated during a century be effaced, though the accumulation may serve to warn us of what we should avoid in the future.

I will recapitulate my argument by saying that priority cannot be applied to generic names, except by the use of some artifice : that no artifice for the purpose has yet received the general sanction of savants : that should such artifice be generally accepted, it cannot be made retrospective in its operation : that, as we cannot bind future generations to our conclusions, we should adopt such system as is most convenient for the present generation : that it would be exceedingly inconvenient to transfer the names *Carabus*, *Melolontha*, *Bruchus*, *Coccinella*, &c., to any extent greater than that which we cannot possibly avoid.

The difficulty, indeed, may be entirely met by only putting the author's name after a generic name in suitable cases. As regards this, I will quote what I have recently said elsewhere (Tr. Roy. Dub. Soc. (2), iii., p. 209) :-- "Considerable difference of opinion prevails at present as to what course should be pursued in citing a name and reference to the genus. Some prefer to refer to the author who first described or defined the genus; while others-looking to the fact that any genus in the lapse of time undergoes great changes-consider we should quote the author who defined the genus in the sense in which the individual now writing uses it. The first of these courses is, it must be admitted, practically of little value except to bibliographers; while the second is unfortunately to a considerable extent impracticable, for the reason that a genus is made what it is at any given moment, not by actual definition, but by definition plus addition and minus subtraction. A defines a genus, say as "Chorazus," making it to consist of ten species; B adds another five species, still calling the aggregate Chorazus; C describes an allied new genus, say Dyclomus, which consists of certain insects plus two of A's and one of B's Chorazi. E, now coming to the subject, finds that Chorazus, as in actual use, is not the same as it was to either A or B; while C, who has been the last of the defining factors in its shaping, has not defined it in any way whatever. For these reasons it has long appeared to me desirable that no rule should become fixed or conventional as to the use of references to generic names. In point of fact four courses may be adopted : first, no author's name need be given when a generic name is used; and this for many purposes is the truest and most simple thing to do, though very unsatisfactory to amateurs of pedantry; second, the name and reference may be to the maker of the generic name-this may be used in bibliographic and synonymic works; third, the name of the last actual describer may be given : this is perhaps the best course for popular works, where brevity and utility are of predominant importance over consistency and completeness; fourth, a history of the genus and its changes may be given, and the course of events by which it has come to be what it is at the moment of writing may be sketched. This latter is the best course, but it involves more expenditure of time and labour than it is worth while to devote to the object in the present transitional state of zoological nomenclature."

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There is yet another consideration which I perhaps ought to mention, though not to rely on it, as it will certainly to many seem unimportant. But I think it quite probable that our present system of zoological nomenclature will not be permanently maintained, but will give place to—or be supplemented by—a system suggested by the experience we have gained during a century and a half of difficulties, and devised as suitable to the Biology of the future; and, if this be at all correct, it is evidently a work of supererogation for us to undergo a vast quantity of inconvenience with a view to rendering the present system permanent.

I hope I have made it clear that so far from being unconventional these transfers are extremely artificial; that there is no ground for supposing they will meet with general assent, or would secure permanency even if they did; and that it is not a wise course for us to go back one hundred years in history with the view of altering our nomenclature, even under the plea that we are by so doing executing justice.